

REMARKS

The Office Action dated July 25, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 18, 26 and 29 have been amended to clearly point out and distinctly claims the invention. Claim 35 has been added. No new matter is added and no issues are raised with require further search. Claims 18-35 are pending and are submitted for consideration.

Claims 18, 21-29, and 32-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,708,033 to Linkola in view of U.S. Patent No. 5,918,181 to Foster, and further in view of U.S. Patent No. 5,043,736 to Darnell. The Office Action took the position that Linkola teaches each and every element recited in claims 18, 21-29, and 32-34, except for wherein responsive to the user equipment not currently being connected in the network, the location of the user equipment is determined in dependence on the stored connection information for the user equipment, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment. Therefore, the Office Action combined the teachings of Linkola with the teachings of Foster and Darnell yield all of the elements of claims 18, 21-29, and 32-34. The rejection is traversed as being based on references that do not teach or suggest each element of independent claims 18 and 29, and the dependent claims thereon, in addition to newly added claim 35.

Independent claim 18, upon which claims 19-28 depend, recites a method in a communication system for providing a location service with geographical location information associated with a user equipment capable of communicating with the communication system. The method includes storing connection information identifying a connection of the user equipment in the communication system. The method also includes determining whether the user equipment is currently reachable in the network. Responsive to the user equipment not currently being reachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment and wherein the connection information includes a service area identity or a cell global identity. The method further includes translating the connection information into geographical coordinates.

Independent claim 29, upon which claims 30-34 depend, recites a communication system including a location server for providing geographical location information associated with a user equipment capable of communicating with the communication system. The communication system also includes a network element for storing connection information identifying a connection of the user equipment in the communication system and for determining whether the user equipment is currently reachable in the network. Responsive to a request from the location server for location information when the user equipment is not currently reachable in the network, the network element provides the location server with details of the connection information last stored for the user equipment, the connection information including a service area

identity or a cell global identity, and wherein the location server translates the connection information into geographical coordinates.

Applicants submit that the cited combination of references fail to teach or suggest the combination of elements recited in any of the presently pending claims

Linkola teaches a system for changing the service profile of a mobile subscriber including a location part, an evaluation part, and a subscriber connection exchange part. A home location register contains individual subscriber connections, which have a different service profiles. The location part finds out the location of the mobile station in the network and to give location information to the evaluation part, which checks if the location information has changed compared with the location information received earlier. If the information has changed, it searches the memory for the corresponding location information and compares the connection information in the record with the current connection information. If the connection information is identical, the process remains waiting for new location information. If the connection information is different, the evaluation logic deduces that the connection must be exchanged for a new one and a connection exchange operation must be started.

Foster teaches method and apparatus for operating and locating a digital cordless telephone (DCT) handset among an integrated network of base stations. The system utilizes a standard communication protocol to establish radio communication links between terminals and a network of base stations, where each base station is directly interfaced to a local exchange and is capable of providing access to the public and/or

private telephone network. Each base station is a network node that contains a copy of a common database that may be updated, as needed, to provide current information on the location of individual terminals. The common database contains various information on each base station, each terminal, and the latest location of each terminal at a particular base station. Foster discloses a system in which a mobile handset is located by the system when an incoming call for the handset is received. Therefore, the handset is only located once a connection needs to be set up. The system in Foster first tries to locate the handset from the base station at which the call is received and at the last known base station of the handset. If this is not successful, the system tries to locate the handset from all base stations in the network. If this does not succeed in locating the handset, then the call to the handset cannot be set up. See at least the Abstract, Col. 8, lines 29-48 and Col. 10, lines 15-29 of Foster.

Darnell discloses a portable locating unit useful both as a cellular telephone and a portable global positioning system that provides latitude and longitude information remotely to a base unit display. The system includes a small hand held receiver that receives signal from a satellite global positioning system and timing and computing circuits to provide location information signals. See at least the Abstract.

Applicants submit that the combination of Linkola, Foster and Darnell fails to teach or suggest each element of the presently pending claims. As acknowledged by the Office Action, Linkola does not teach, show, or suggest that responsive to the user equipment not currently being connected in the network, the location of the user

equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claims 18 and 29. However, the Office Action alleged that Foster provides this teaching.

Applicants submit that there is no teaching, showing, or suggestion in Foster of responsive to the user equipment not currently being connected in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claims 18 and 29. The Office Action indicated that “reachable,” as recited in the presently pending claims, means “to succeed in getting in contact with or communication with.” If this definition is applied to Foster, Col. 8, lines 36-48 of Foster teaches attempts to “reach” the terminal by “polling” it from different base stations. The cited section of Foster also teaches that if the terminal is “reachable” the base station transmits a “found” message and if the terminal is “not reachable” the call to the terminal is not set up.

Hence, Col. 8, lines 29-31 of Foster discloses that the first attempts is to reach the terminal from the base station in which the call is received and from the last known location of the terminal. If this is not successfully, Foster then proceeds with a system wide search where each base station simultaneously attempts to reach the terminal. According to Col. 10, lines 15-29 of Foster, if the terminal is not reached and a time period of 8 seconds expires, then the call is diverted to a default extension and the call to the terminal is not set up. It is therefore clear that in Foster the last known location is used as part of the determination as to whether the terminal is reachable. Therefore, the

last location is **not** used **responsive** to the user equipment **not currently being reachable** in the network, as recited in the presently pending claims. This is because, at the point in time in which the last known location is used in Foster, the system has not yet determined whether the terminal is reachable. Therefore, Applicants submit that Foster also does not teach or suggest responsive to the user equipment not currently being connected in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in the presently pending claims.

The Office Action also alleged that although Linkola does not teach or suggest translating the connection information into geographical coordinates, as recited in claim 18, Darnell discloses this teaching. As noted above, the Abstract of Darnell discloses that the system includes a small hand held receiver that receives signals from a satellite global positioning system and timing and computing circuits to provide location information signals. Col. 1, lines 50-58 of Darnell also discloses that the portable remote unit includes an RF receiver circuit for use with a satellite navigation system, a microprocessor for analyzing coded signals, cellular phone modem circuits for transmitting encoded signals to the base unit and a time of day clock. According to Col. 1, lines 50-58 of Darnell, the base unit includes a computational system for decoding position data and a visual display device for presenting the remote unit map coordinates. Applicants submit that it is therefore clear that the system in Darnel is directed to receiving global positioning system (GPS) signals and transmitting these signals to a

“base unit” using cellular communications, where the location calculation can be performed.

In the present invention, on the other hand, there is no translation of connection information to geographical coordinates. Applicants submit that a GPS signal is not “connection information,” as recited in claims 18 and 29, where the connection information “includes a service area identity or a cell global identity.” A GPS system does not have any components that are equivalent to a service area identity or a cell global identity, as recited in claims 18 and 29. Rather GPS signals are specific and precise signals that are solely used for accurately determining the position of a receiver. Therefore, Applicants submit that Darnell does not teach or suggest translating the connection information into geographical coordinates, as recited in claims 18 and 29. Base on the discussion above, Applicants submit that independent claims 18 and 29 recite subject matter that is not taught, shown, or otherwise suggested by the combination of Linkola, Foster and Darnell. As such, reconsideration and withdrawal of the rejection of independent claims 18 and 29, along with dependent claims 19-28 and 30-34, is respectfully requested.

Claims 22, 23, 24 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Linkola, Foster and Darnell, further in view of Official Notice. The Office Action took the position that Linkola, Foster and Darnell teach each and every element recited in claims 22, 23, 24 and 25, except for storing the connection information in a radio network controller of the communication system or in a mobile switching

center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system. However, the Office Action alleged that storing the connection information in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system are known in the art. Therefore, according to the Office Action, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Linkola, Foster and Darnell to provide the method as claimed. Applicants traverse the rejection and respectfully submit that the cited combination of references, when taken alone or in combination, fails to teach, show, or suggest each and every limitation recited in claim 18, upon which claims 22, 23, 24 and 25 depend.

Applicants submit that the Office Action has provided no proof that connection information, as recited in claims 22, 23, 24 and 25, is known to those skilled in the art. Specifically, the Office Action has provided no proof that connection information including a service area identity or a cell global identity, as recited in claim 18, is known to one skilled in the art to be stored in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system. Thus, Applicants traverse the allegation made by the Office Action that it is known to those skilled in the art that connection information is to be

stored in a radio network controller of the communication system or in a mobile switching center of the communication system or in a GPRS support node of the communication system or in a serving mobile location center of the communication system, as recited in claims 22, 23, 24 and 25. Furthermore, as presented above, the cited references of Linkola, Foster and Darnell fails to teach or suggest responsive to the user equipment not currently being connected in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment and translating the connection information into geographical coordinates, as recited in claim 18, upon which claims 22, 23, 24 and 25 depend. Therefore, reconsideration and withdrawal of the rejection of claims 22, 23, 24 and 25 is respectfully requested.

Claims 19, 20, 30, and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Linkola, Foster and Darnell, further in view of U.S. Patent No. 6,603,976 to Amirijoo. The Office Action took the position that Linkola, Foster and Darnell teach each and every element recited in claims 19, 20, 30, and 31, except for the location service being provided by a gateway mobile location center. However, the Office Action cites to Amirijoo as teaching this feature, and as such, the Office Action concluded that it would have been obvious to one of ordinary skill in the art to have combined the teaching of the references to generate claims 19, 20, 30, and 31. Applicants traverse the rejection and respectfully submit that the cited combination of references, when taken alone or in combination, fails to teach, show, or suggest each and

every limitation recited in claims 18 and 29, upon which claims 19, 20, 30, and 31 depend.

Linkola and Foster are discussed above. Amirijoo teaches a wireless communications system capable of delivering Time Of Arrival (TOA) positioning data to at least one externally operated and maintained requesting agent, including a gateway to the external agent, which provides an interface to the requesting agent.

Amirijoo does not cure the deficiencies of Linkola, Foster and Darnel, as outlined above. Specifically, Amirijoo does not teach, show, or suggest translating the connection information into geographical coordinates and determining whether the user equipment is currently reachable in the network, wherein responsive to the user equipment not currently being reachable in the network, the location of the user equipment is determined in dependence on the last stored connection information for the user equipment, as recited in claims 18 and 29, upon which claims 19, 20, 30, and 31 depend. Therefore, reconsideration and withdrawal of the rejection of claims 19, 20, 30, and 31 is respectfully requested.

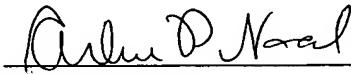
As noted previously, claims 18-35 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 18-35 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Arlene P. Neal
Registration No. 43,828

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

APN:kzw